IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant	Pavel Novak
Application No. 10/601,406	Filing Date: June 23, 2003
Title of Application:	System For Controlling Medical Devices
Confirmation No. 7777	Art Unit: 2152
Examiner:	Dailey, Thomas J.

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Appeal Brief Under 37 CFR §41.37

Dear Sir:

A Notice of Appeal from the final rejection of Claims 1-8, 10-29, 31-50, 52-71 and 73-82, all pending claims of U.S. Patent Application No. 10/601,406, being filed herewith, Appellant accordingly files its Appeal Brief in connection with its appeal. A Claims Appendix is submitted herewith, as are Appendices related to evidence previously submitted and decisions related to the case.

(i) Real Party In Interest

The real party in interest is Storz Endoskop Produktions GmbH of Tuttlingen, Germany, assignee of the present patent application.

(ii) Related Appeals and Interferences

There are no related Appeals or Interferences.

(iii) Status Of Claims

Claims 9, 30, 51 and 72 have been cancelled. Claims 1-8, 10-29, 31-50, 52-71 and 73-82 stand rejected and are the subject of the instant Appeal. A copy of each of these claims is attached hereto in the Claims Appendix.

(iv) Status Of Amendments

No amendments have been made since mailing of the Final Office Action on July 25, 2008.

(v) Summary Of Claimed Subject Matter

Claims 1, 22, 40, 41, 42, 43, 64 and 82 are the rejected independent claims and are discussed below.

Independent Claim 1

Claim 1 is directed to a system which controls ancillary medical devices (62, 64, 66, 48), having a surgical network (10), an input device (70), connected to the surgical network (10), which inputs a medical command, a controller (30), connected to the surgical network (10), which receives the medical command and generates corresponding medical command data, and a translator (40), connected to the surgical network (10), which receives the medical command data via the surgical network (10) and translates the medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. At least one ancillary medical device (62, 64, 66, 48), in communication with the translator (40) via an ancillary network (12), receives the translated medical command data and carries out the corresponding medical command, and a data stream, generated by at least one of the at least one ancillary medical devices (62, 64, 66, 48), is communicated to the translator (40) via the ancillary network (12), with a higher bandwidth than the surgical network (10) is capable of transmitting. *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

Independent Claim 22

Claim 22 is directed to a system which controls ancillary medical devices (62, 64, 66, 48), having a surgical network (10), an input device (70), connected to the surgical network (10), which inputs a medical command, a controller (30), connected to the

surgical network (10), which receives the medical command and generates corresponding medical command data, and a translator (40), connected to the surgical network (10), which receives the medical command data via the surgical network (10) and translates the medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. At least one ancillary medical device (62, 64, 66, 48), in communication with the translator (40) via an ancillary network (12), receives the translated medical command data and carries out the corresponding medical command, and feedback data generated by the at least one ancillary medical device (62, 64, 66, 48) is communicated to the translator (40) via the ancillary network (12). *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

<u>Independent Claim 40</u>

Claim 40 is directed to a system for controlling both primary medical devices (22, 24, 26, 48), which are part of a surgical network (10), and ancillary medical devices (62, 64, 66, 48), having a surgical network (10), an input device (70), connected to the surgical network (10), which inputs a medical command, and a controller (30), connected to the surgical network (10), which receives the medical command and generates corresponding medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. At least one primary medical device (26, 48), connected to the surgical network (10), includes a first translator (92, 94, 96, 86) which receives the

medical command data via the surgical network (10) and translates the medical command data, and at least one ancillary medical device (66, 48), in communication with the first translator (92, 94, 96, 86), receives the translated medical command data and carries out the corresponding medical command. *See, e.g.,* Spec. page 13, line 18 – page 14, line 20; Fig. 1. A data stream is generated by at least one of the at least one ancillary medical devices (66, 48), with a higher bandwidth than the surgical network (10) is capable of transmitting, and a second translator (40), in communication both with the surgical network (10) and with an ancillary network (12), receives the data stream via the ancillary network (12) and translates the data stream. *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

Independent Claim 41

Claim 41 is directed to a system for controlling both primary medical devices (22, 24, 26, 48), which are part of a surgical network (10), and ancillary medical devices (62, 64, 66, 48), having a surgical network (10), an input device (70), connected to the surgical network (10), which inputs a medical command, and a controller (30), connected to the surgical network (10), which receives the medical command and generates corresponding medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. At least one primary medical device (26, 48), connected to the

surgical network (10), includes a first translator (92, 94, 96, 86) which receives the medical command data via the surgical network (10) and translates the medical command data, and at least one ancillary medical device (66, 48), not connectable to the surgical network (10), connected to the first translator (92, 94, 96, 86), receives the translated medical command data and carries out the corresponding medical command. *See, e.g.,* Spec. page 13, line 18 – page 14, line 20; Fig. 1. Feedback data is generated by the at least one ancillary medical device (66, 48), and a second translator (40), in communication both with the surgical network (10) and with an ancillary network (12), receives the feedback data via the ancillary network (12) and translates the feedback data. *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

Independent Claim 42

Claim 42 is directed to a system which controls medical devices (22, 24, 26, 48, 62, 64, 66), having a surgical network (10), an input device (70), connected to the surgical network (10), which inputs a medical command, and a controller (30), connected to the surgical network (10), which receives the medical command and generates corresponding medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. The system also includes an ancillary network (12) and a medical device (66, 48), connected to the surgical network (10), the medical device (66,

48) including a first interface (96, 86) by which the medical device (66, 48) is connected to the surgical network (10) and by which the medical device (66, 48) receives the command data via the surgical network (10), and also includes a second interface (not labeled, 88), by which the medical device (66, 48) is in communication with the ancillary network (12). *See, e.g.,* Spec. page 13, line 18 – page 14, line 20; Fig. 1. A data stream is generated by the medical device (66, 48), with a higher bandwidth than the surgical network (10) is capable of transmitting, and is communicated to the ancillary network (12). *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

Independent Claim 43

Claim 43 is directed to a method for controlling ancillary medical devices (62, 64, 66, 48) involving the steps of providing a surgical network (10), entering a medical command into the surgical network (10), generating corresponding medical command data, communicating the medical command data via the surgical network (10) and translating the medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. The translated medical command data is communicated to an ancillary medical device (62, 64, 66, 48), the corresponding medical command is executed with the ancillary medical device (62, 64, 66, 48), and a data stream, having a higher bandwidth than the surgical network (10) is capable of transmitting, is generated with

the ancillary medical device (62, 64, 66, 48), is communicated via an ancillary network (12), is translated and then is communicated to the surgical network (10). *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

<u>Independent Claim 64</u>

Claim 64 is directed to a method for controlling ancillary medical devices (62, 64, 66, 48) involving the steps of providing a surgical network (10), entering a medical command into the surgical network (10), generating corresponding medical command data, communicating the medical command data via the surgical network (10) and translating the medical command data. *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; Fig. 1. The translated medical command data is communicated to an ancillary medical device (62, 64, 66, 48) that is not connectable to the surgical network (10), the corresponding medical command is executed with the ancillary medical device (62, 64, 66, 48), and feedback data is generated with the ancillary medical device (62, 64, 66, 48), is communicated via an ancillary network (12), is translated and then is communicated to the surgical network (10). *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

Independent Claim 82

Claim 82 is directed to a method for controlling medical devices (22, 24, 26, 48, 62, 64, 66) involving the steps of providing a surgical network (10), providing an ancillary network (12) and providing a medical device (66, 48) having a first interface (96, 86) and a second interface (not labeled, 88). *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; page 8, line 2 – page 9, line 16; Fig. 1. A medical command is entered into the surgical network (10), corresponding medical command data is generated, and the medical command is communicated to the medical device (66, 48) via the first interface (96, 86) via the surgical network (10). *See, e.g.,* Spec. page 8, line 2 – page 9, line 16; page 8, line 2 – page 9, line 16; Fig. 1. The medical command is executed with the medical device (66, 48), and a data stream, having a higher bandwidth than the surgical network (10) is capable of transmitting, is generated with the medical device (66, 48), which data stream is communicated to the ancillary network (12) via the second interface (not labeled, 88). *See, e.g.,* Spec. page 9, line 17 – page 10, line 8; page 11, lines 6-21; page 14, line 21 – page 15, line 22; Figs. 1 and 2.

(vi) Grounds Of Rejection To Be Reviewed On Appeal

Claims 1-2, 10-12, 18-23, 31-33, 39-44, 52-54, 60-65, 73-75, and 81-82 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (U.S. Patent No. 5,788,688), in view of what is well known in the art.

Claims 3-4, 8, 13-14, 17, 24-25, 29, 34-35, 38, 45-46, 50, 55-56, 59, 66-67, 71, 76-77, and 80 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer as applied to claims 1, 22, 43, and 64 above, and further in view of Flach et al. (US Pat. 6,589,170).

Claims 5, 15, 26, 36, 47, 57, 68, and 78 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Flach as applied to claims 4, 14, 25, 35, 46, 56, 67, and 77 above, and further in view of what was well known in the art.

Claims 6-7, 16, 27-28, 37, 48-49, 58, 69-70, and 79 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer as applied to claims 1, 22, 43, and 64 above, and further in view of Suzuki (U.S. Patent No. 7,103,646).

(vii) Argument

Rejection of Claims 1-2, 10-12, 18-23, 31-33, 39-44, 52-54, 60-65, 73-75 and 81-82 as Being Unpatentable Over Bauer in View of What Is Well Known in the Art

Claims 1, 22, 40, 41, 42, 43, 64 and 82, all independent claims in the present application, stand rejected as being unpatentable over Bauer in view of what is well known in the art. As all of these claims share common patentable elements, they are treated together below.

Bauer Does Not Anticipate the Independent Claims

The present invention relates to a system for simultaneously controlling primary medical devices, which are connected to a surgical network, and ancillary devices, which are not compatible with the surgical network, or at least transmit some data which can not be carried by the surgical network. Traditional systems, such as the one disclosed in Bauer, for controlling both primary medical devices and ancillary devices have relied upon two completely separate networks for controlling these two different types of devices. Thus, for example, Bauer includes a first network (i.e., a surgical network) comprising an IEEE-488 or RS-485 card (designated as 76 in Figure 3) with which devices 44, 46 are in communication, and a second network (i.e., an ancillary network or video network) comprising a frame store card (designated as 90 in Figure 3) with which VGA monitor 68, video fail-safe switch 94, camera control unit 49 and

endoscopic camera 74 are in communication. More specifically, all communications with components of the first network 76, 44, 46 take place via the first network (i.e., no communications concerning any of these components is communicated over the second network), and all communications with components of the second network 90, 68, 94, 49, 74 take place via the second network (i.e., no communications concerning any of these components is communicated over the first network).

The present invention, on the other hand, recognizes that providing two completely separate networks is often not the optimum solution. Certain types of networks provide advantages over others (e.g., certain types of networks are more conducive to the transmission of command data than others, certain types of networks are more conducive to the transmission of video data than others, etc.), and often it is not the best solution to completely isolate a device to only a single network for all communications for all purposes. All independent claims are specifically tailored to highlight novel aspects of the invention which are based upon this recognition.

More specifically, all independent claims recite both a surgical network and an ancillary network. All independent claims also recite that at least one medical device is in communication, at least indirectly, with both networks and that medical command data for controlling the medical device be communicated over the surgical network, and

also that a data stream or feedback data generated by the medical device be communicated over the ancillary network. Appellant respectfully submits that Bauer does not disclose, teach or suggest these limitations.

If either of the devices 44, 46 connected to the "surgical network" (i.e., the network with which control unit 66 communicates via the IEEE-488 or RS-485 card 76) are considered to be the claimed medical device, all elements of the independent claims are not satisfied, in that these devices 44, 46 are not in communication in any way with the "ancillary network" (i.e., the network with which control unit 66 communicates via the frame store card 90), and these devices 44, 46 certainly do not generate a data stream or feedback data communicated via the "ancillary network" (i.e., <u>all</u> communications to/from devices 44, 46 is via the "surgical network").

If any of the devices 68, 94, 49, 74 connected to the "ancillary network" (i.e., the network with which control unit 66 communicates via the frame store card 90) are considered to be the claimed medical device, all elements of the independent claims are not satisfied, in that these devices 68, 94, 49, 74 are not in communication in any way with the "surgical network" (i.e., the network with which control unit 66 communicates via the IEEE-488 or RS-485 card 76), and these devices 68, 94, 49, 74 are certainly not controlled by any medical command data that has been communicated via the "surgical

network.” (i.e., all communications to/from devices 68, 94, 49, 74 is via the “ancillary network”).

Lastly, if the control unit 66 is considered to be to be the claimed medical device, all elements of the independent claims are also not satisfied. As discussed above, it is required by all independent claims that medical command data for controlling the medical device be communicated over the surgical network, and also that a data stream or feedback data generated by the medical device be communicated over the ancillary network. Thus, even if the control unit 66 is interpreted to generate a data stream or feedback data and communicate such over the “ancillary network” (i.e., the network with which control unit 66 communicates via the frame store card 90), it cannot be said that any medical command data for controlling the claimed medical device is communicated via the “surgical network” (i.e., the network with which control unit 66 communicates via the IEEE-488 or RS-485 card 76). This is true because it is control unit 66 itself that generates the medical command data. Thus, it simply cannot be said that the control unit 66 is communicating the medical command data that it generates to itself via the “surgical network.”

In view of the above, Appellant respectfully submits that Bauer does not anticipate any claim of the present application, as Bauer clearly does not disclose every element of any single claim.

Bauer and "What Is Well Known in the Art"
Do Not Render Obvious the Independent Claims

The Examiner urges that it would have been an obvious modification of Bauer to require transmitting command and control information to an auxiliary medical device, such as a camera, via the surgical network. However, Bauer directly teaches against such a configuration. Bauer indicates a plurality of communication interface circuits, one for each piece of surgical equipment (column 3, lines 6-7), whereby data is transmitted to and from the surgeon's control panel via the ancillary circuit. In contrast, the present invention requires that the information will be transmitted over the surgical network, thus allowing the medical device to directly communicate with the control center, without having the signal first go through the ancillary network and reach the controller, as Bauer does.

Transmitting the data over the same connection works more efficiently that having the signal first go through the ancillary network. Certain types of networks provide advantages over others and often it is not the best solution to completely isolate

a device to only a single network for all purposes of communication. The present invention allows auxiliary medical devices to communicate with multiple networks (surgical and ancillary). This allows for a more efficient distribution of resources, works more quickly, and provides greater flexibility to the system.

Bauer is not concerned with optimizing network communications between the medical instruments and the centralized controller. However, the present invention, as claimed, is geared towards network optimization, which differentiates the present invention from Bauer. It would not be obvious to transmit command and control information via the surgical network, as this requires optimizing the network communication system. Bauer does not claim any advances to optimize the network communication system, and rather is concerned solely with the big picture view of a surgeon's command and control center. In contrast, all independent claims of the present invention are concerned with optimizing the network communication system.

Essentially, the entirety of the Examiner's rejection rests on the assertion, first introduced in the Office Action mailed January 2, 2008, that: "Therefore Official Notice (see MPEP 2144.01) is taken that it would have been obvious to one of ordinary skill in the art to send command and control information to Bauer's endoscopic camera over the same connection (the surgical network) that it sends command and control

information to surgical equipment in order to have a common interface to distribute commands of all the devices." Appellant respectfully, but strongly, traverses this assertion.

First, the Examiner's apparent attempt to take Official Notice as to what "would have been obvious to one of ordinary skill in the art" is unquestionably improper. Even in the very limited circumstances where it is proper for Official Notice to be taken, Official Notice may only be taken of "<u>facts</u> not in the record." See MPEP 2144.03. Certainly, whether or not some modification would or would not be obvious to one of ordinary skill in the art is not a <u>fact</u>, and therefore, any attempt to take Official Notice as to whether or not a modification would be obvious is entirely improper. While in Paragraph 4 of the Final Office Action mailed July 25, 2008, it appears that the Examiner is attempting to better recite a <u>fact</u> of which official notice is being taken, in Paragraph 9 thereof, it is again stated that: "Therefore *Official Notice (see MPEP 2144.03) is taken that it would have been obvious* to one of ordinary skill in the art…". As such, Appellant again points out that whether or not something is obvious is a legal conclusion, and not a fact, and therefore that it is improper to attempt to take official notice that something is <u>obvious</u>.

In view of the above, Appellant assumes that the Examiner was instead attempting to take Official Notice of the alleged "fact" that it was common knowledge in the art, in the context of medical device control systems, to send command and control information to a first medical device (e.g., an endoscopic camera) over the same connection (e.g., a surgical network) that it sends command and control information to other surgical devices in order to have a common interface to distribute commands of all the devices, but receive data back from the first medical device (e.g., video data from an endoscopic camera) over a second, separate network (e.g., an ancillary network). Again, Appellant strongly disagrees and traverses this contention.

With respect to the appropriateness of taking Official Notice in general, the MPEP and case law make crystal clear that the situations when taking Official Notice is appropriate are extremely limited. More specifically, MPEP 2144.03, in part, states the following:

> Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known. As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be

"capable of such instant and unquestionable demonstration as to defy dispute" (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)).

It would <u>not</u> be appropriate for the examiner to take official notice of facts without citing a prior art reference where the facts asserted to be well known are not capable of instant and unquestionable demonstration as being well-known. For example, assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979) ("[W]hen the PTO seeks to rely upon a chemical theory, in establishing a prima facie case of obviousness, it must provide evidentiary support for the existence and meaning of that theory."); *In re Eynde,* 480 F.2d 1364, 1370, 178 USPQ 470, 474 (CCPA 1973) ("[W]e reject the notion that judicial or administrative notice may be taken of the state of the art. The facts constituting the state of the art are normally subject to the possibility of rational disagreement among reasonable men and are not amenable to the taking of such notice.").

It is never appropriate to rely solely on "common knowledge" in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based. *Zurko*, 258 F.3d at 1385, 59 USPQ2d at 1697 ("[T]he Board cannot simply reach conclusions based on its own understanding or experience- or on its assessment of what would be basic knowledge or common sense. Rather, the Board must point to some concrete evidence in the record in support of these findings."). While the court explained that, "as an administrative tribunal the Board clearly has expertise in the subject matter over which it exercises jurisdiction," it made clear that such "expertise may provide sufficient support for conclusions [only] as to peripheral issues." *Id.* at 1385-86, 59 USPQ2d at 1697.

Any rejection based on assertions that a fact is well-known or is common knowledge in the art without documentary evidence to support the examiner's conclusion should be judiciously applied. Furthermore, as noted by the court in *Ahlert*, any facts so noticed should be of notorious character and serve only to "fill in the gaps" in an insubstantial manner which might exist in the evidentiary showing made by the examiner to support a particular ground for rejection. It is never appropriate to rely solely on common knowledge in the art without evidentiary support in the record as the principal evidence upon which a rejection

> was based. See *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697; *Ahlert*, 424 F.2d at 1092, 165 USPQ 421.

The MPEP and case law also make clear the fact that if Appellant challenges a factual assertion as not properly officially noticed, the Examiner must support the finding with adequate evidence. In this regard, MPEP 2144.03, in part, states as follows:

> If applicant adequately traverses the examiner's assertion of official notice, the examiner must provide documentary evidence in the next Office action if the rejection is to be maintained. See 37 CFR 1.104(c)(2). See also *Zurko*, 258 F.3d at 1386, 59 USPQ2d at 1697 ("[T]he Board [or examiner] must point to some concrete evidence in the record in support of these findings" to satisfy the substantial evidence test). If the examiner is relying on personal knowledge to support the finding of what is known in the art, the examiner must provide an affidavit or declaration setting forth specific factual statements and explanation to support the finding. See 37 CFR 1.104(d)(2).

In the present case, there are a number of deficiencies with the Examiner's attempt to take Official Notice. For example, in addition to the above-discussed erroneous attempt to take Official Notice as to a conclusion of obviousness rather than a fact, the Examiner has completely failed to provide any background or basis for his belief that the "fact" was alleged to have been capable of instant and unquestionable demonstration as being well-known in the art on January 17, 2003 (i.e., the earliest effective priority date of the present application). Thus, what may or may not be well-known in the art <u>now</u> is not prior art to the present application. What is germane to the

question of patentability is what was capable of instant and unquestionable demonstration as being well-known in the art during the 2002/2003 time frame or earlier. The Examiner has provided absolutely no basis for his understanding of what was well known in the art more than 5 years ago. For example, the Examiner has provided absolutely no evidence that he was an expert in the field of medical control systems during that time period. Moreover, he has provided no evidence that his understanding of what was well-known during the 2002/2003 time frame was based upon some documentation from that time. Appellant respectfully submits that that an affidavit or declaration or some supporting documentation is necessary to support the Examiner's contention, or else any examiner would be free at any time to reject every single application he was faced with simply by asserting that the invention was "well known in the art" without any evidence whatsoever.

In Paragraph 4 of the Final Office Action mailed July 25, 2008, the Examiner claims that "[t]he applicant has not stated 'why the noticed fact is not considered to be common knowledge or well-known in the art.'" While Appellant disagrees and believes that it has previously stated such, Appellant, for the sake of clarity, states that it was not common knowledge or well-known in the art during the 2002/2003 time frame for surgical devices, such as cameras, to be provided command and control information over one type of network and transmit a data stream, such as a video data stream, over

a second type of network. During the 2002/2003 time frame, surgical devices, such as cameras, were connected to only one type of network, and all communications to/from these devices took place via that one type of network (as evidenced by Bauer itself).

Moreover, as quoted above: "It is never appropriate to rely solely on 'common knowledge' in the art without evidentiary support in the record, as the principal evidence upon which a rejection was based." In the present case, the crux of Appellant's invention, and the distinguishing feature of all claims, is a medical device control system which sends command and control information to a first medical device over the same connection (e.g., a surgical network) that it sends command and control information to other surgical devices, but receives data back from the first medical device over a second, separate network (e.g., an ancillary network). As this is the main distinguishing feature of the present invention, and as this is the very feature of which the Examiner is apparently attempting to take Official Notice, the Examiner's attempt to take Official Notice is the principal evidence upon which the rejection was based. This is clearly improper.

In Paragraph 6 of the Final Office Action mailed July 25, 2008, the Examiner attempts to characterize the "fact" of which he is seeking to take official notice as secondary, and characterize Bauer as "the principal evidence." However, as pointed

out above, the “fact” of which the Examiner is attempting to take official notice goes to the very the crux of Appellant’s invention, and to the distinguishing feature of all claims. As such, Appellant believes it is clear that this “fact” is certainly the principal evidence upon which the rejection was based.

Rejection of Claims 3-4, 8, 13-14, 17, 24-25, 29, 34-35, 38, 45-46, 50, 55-56, 59, 66-67, 71, 76-77, and 80 as Being Unpatentable Over Bauer and Flach

Claims 3-4, 8, 13-14, 17, 24-25, 29, 34-35, 38, 45-46, 50, 55-56, 59, 66-67, 71, 76-77, and 80 ultimately depend from one of Claims 1, 22, 43, and 64. As such, Appellant respectfully submits that Claims 3-4, 8, 13-14, 17, 24-25, 29, 34-35, 38, 45-46, 50, 55-56, 59, 66-67, 71, 76-77, and 80 are patentable over Bauer for the reasons set forth above. Furthermore, Appellant respectfully submits that Flach discloses nothing that would render obvious the present invention as claimed, either alone or in combination with the teachings of Bauer. While Flach discloses use of Ethernet, Flach does not disclose, teach or suggest anything whatsoever concerning the network optimization of the present invention that is missing from Bauer.

Rejection of Claims 5, 15, 26, 36, 47, 57, 68, and 78 as Being Unpatentable Over Bauer and Flach In View of What Is Well-Known in the Art

Claims 5, 15, 26, 36, 47, 57, 68, and 78 depend from Claims 4, 14, 25, 35, 46, 56, 67, and 77, respectively. As such, Appellant respectfully submits that Claims 5, 15,

26, 36, 47, 57, 68, and 78 are patentable over Bauer and Flach for the reasons set forth above. Furthermore, Appellant respectfully submits that “what is well-known in the art” discloses nothing that would render obvious the present invention as claimed, either alone or in combination with the teachings of Bauer or Flach. The issue of “what is well-known in the art” was addressed above with respect to the patentability of the independent claims.

Rejection of Claims 6-7, 16, 27-28, 37, 48-49, 58,
69-70, and 79 as Being Unpatentable Over Bauer and Suzuki

Claims 6-7, 16, 27-28, 37, 48-49, 58, 69-70, and 79 ultimately depend from one of Claims 1, 22, 43, and 64. As such, Appellant respectfully submits that Claims 6-7, 16, 27-28, 37, 48-49, 58, 69-70, and 79 are patentable over Bauer for the reasons set forth above. Furthermore, Appellant respectfully submits that Suzuki discloses nothing that would render obvious the present invention as claimed, either alone or in combination with the teachings of Bauer. While Suzuki teaches an Ethernet network as well as self-configuring and CAN buses, and how these buses handle an order of information, Suzuki does not disclose, teach or suggest anything whatsoever concerning the network optimization of the present invention that is missing from Bauer.

Conclusion

For the foregoing reasons, Appellant respectfully submits that the claimed invention embodied in each of claims 1-8, 10-29, 31-50, 52-71 and 73-82 is patentable over the cited prior art. As such, Appellant respectfully requests that the rejections of each of claims 1-8, 10-29, 31-50, 52-71 and 73-82 be reversed and the Examiner be directed to issue a Notice of Allowance allowing each of these claims.

Respectfully submitted,

November 25, 2008

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Claims Appendix
to Appeal Brief Under 37 CFR §41.37
Serial No. 10/601,406

1. A system which controls ancillary medical devices, comprising:

a surgical network;

an input device, connected to said surgical network, which inputs a medical command;

a controller, connected to said surgical network, which receives the medical command and generates corresponding medical command data;

a translator, connected to said surgical network, which receives the medical command data via said surgical network and translates the medical command data;

at least one ancillary medical device, in communication with said translator via an ancillary network, which receives the translated medical command data and carries out the corresponding medical command; and

a data stream, generated by at least one of said at least one ancillary medical devices and communicated to said translator via said ancillary network, with a higher bandwidth than said surgical network is capable of transmitting.

2. The system of claim 1, wherein said input device is connected to said controller.

3. The system of claim 1, wherein said translator is in communication with at least one of said at least one ancillary medical devices via an Ethernet connection.

4. The system of claim 1, wherein said translator is in communication with at least one of said at least one ancillary medical devices via a wireless connection.

5. The system of claim 4, wherein said wireless connection is a Bluetooth connection.

6. The system of claim 1, wherein said surgical network includes a self-configuring bus.

7. The system of claim 6, wherein said bus is a CAN bus.

8. The system of claim 1, wherein said surgical network comprises an Ethernet.

9. (cancelled)

10. The system of claim 1, further comprising an ancillary controller connected to said ancillary network.

11. The system of claim 10, wherein said ancillary network includes an ancillary input device.

12. The system of claim 11, wherein said ancillary input device is connected to said ancillary controller.

13. The system of claim 10, wherein said translator is in communication with said ancillary controller via an Ethernet connection.

14. The system of claim 10, wherein at least one of said at least one ancillary medical devices is in communication with said ancillary controller via a wireless connection.

15. The system of claim 14, wherein said wireless connection is a Bluetooth connection.

16. The system of claim 1, wherein said ancillary network includes a self-configuring bus.

17. The system of claim 1, wherein said ancillary network comprises an Ethernet.

18. The system of claim 1, wherein said translator includes a lookup table for performing translations.

19. The system of claim 1, wherein said data stream is video data, the system further comprising a monitor, which is connected to said surgical network, which reproduces said video data as a video image after said video data has been translated by said translator.

20. The system of claim 19, wherein the video image is a live video feed.

21. The system of claim 19, wherein said surgical network includes at least one primary medical device, and the video image is a visual representation of at least one of said primary or ancillary medical devices.

22. A system which controls ancillary medical devices, comprising:

a surgical network;

an input device, connected to said surgical network, which inputs a medical command;

a controller, connected to said surgical network, which receives the medical command and generates corresponding medical command data;

a translator, connected to said surgical network, which receives the medical command data via said surgical network and translates the medical command data;

at least one ancillary medical device not connectable to said surgical network, in communication with said translator via an ancillary network, which receives the translated medical command data and carries out the corresponding medical command; and

feedback data generated by said at least one ancillary medical device and communicated to said translator via said ancillary network.

23. The system of claim 22, wherein said input device is connected to said controller.

24. The system of claim 22, wherein said translator is in communication with at least one of said at least one ancillary medical device via an Ethernet connection.

25. The system of claim 22, wherein said translator is in communication with at least one of said at least one ancillary medical devices via a wireless connection.

26. The system of claim 25, wherein said wireless connection is a Bluetooth connection.

27. The system of claim 22, wherein said surgical network includes a self-configuring bus.

28. The system of claim 27, wherein said bus is a CAN bus.

29. The system of claim 22, wherein said surgical network comprises an Ethernet.

30. (cancelled)

31. The system of claim 22, further comprising an ancillary controller connected to said ancillary network.

32. The system of claim 31, wherein said ancillary network includes an ancillary input device.

33. The system of claim 32, wherein said ancillary input device is connected to said ancillary controller.

34. The system of claim 31, wherein said translator is in communication with said ancillary controller via an Ethernet connection.

35. The system of claim 31, wherein at least one of said at least one ancillary medical devices is in communication with said ancillary controller via a wireless connection.

36. The system of claim 35, wherein said wireless connection is a Bluetooth connection.

37. The system of claim 22, wherein said ancillary network includes a self-configuring bus.

38. The system of claim 22, wherein said ancillary network comprises an Ethernet.

39. The system of claim 22, wherein said translator includes a lookup table for performing translations.

40. A system for controlling both primary medical devices, which are part of a surgical network, and ancillary medical devices, comprising:

a surgical network;

an input device, connected to said surgical network, which inputs a medical command;

a controller, connected to said surgical network, which receives the medical command and generates corresponding medical command data;

at least one primary medical device, connected to said surgical network, having a first translator which receives the medical command data via said surgical network and translates the medical command data;

at least one ancillary medical device, in communication with the first translator, which receives the translated medical command data and carries out the corresponding medical command;

a data stream, generated by at least one of said at least one ancillary medical devices, with a higher bandwidth than said surgical network is capable of transmitting; and

a second translator, in communication both with said surgical network and with an ancillary network, which receives said data stream via said ancillary network and translates said data stream.

41. A system which controls both primary medical devices, which are part of a surgical network, and ancillary medical devices, comprising:

a surgical network;

an input device, connected to said surgical network, which inputs a medical command;

a controller, connected to said surgical network, which receives the medical command and generates corresponding medical command data;

at least one primary medical device, connected to said surgical network, having a first translator which receives the medical command data via said surgical network and translates the medical command data;

at least one ancillary medical device not connectable to said surgical network, connected to said first translator, which receives the translated medical command data and carries out the corresponding medical command;

feedback data generated by said at least one ancillary medical device; and

a second translator, in communication both with said surgical network and with an ancillary network, which receives said feedback data via said ancillary network and translates said feedback data.

42. A system which controls medical devices, comprising:

a surgical network;

an input device, connected to said surgical network, which inputs a medical command;

a controller, connected to said surgical network, which receives the medical command and generates corresponding medical command data;

an ancillary network;

a medical device connected to said surgical network, said device having a first interface, by which said medical device is connected to said surgical network and by which said medical device receives the command data via said surgical network, and a second interface, by which said medical device is in communication with said ancillary network; and

a data stream, generated by said medical device and communicated to said ancillary network, with a higher bandwidth than said surgical network is capable of transmitting.

43. A method for controlling ancillary medical devices, the method comprising:

providing a surgical network;

entering a medical command into the surgical network;

generating corresponding medical command data;

communicating the medical command data via the surgical network;

translating the medical command data;

communicating the translated medical command data to an ancillary medical device;

executing the corresponding medical command with the ancillary medical device;

generating a data stream, having a higher bandwidth than the surgical network is capable of transmitting, with the ancillary medical device;

communicating the data stream via an ancillary network;

translating the data stream; and

communicating the translated data stream to the surgical network.

44. The method of claim 43, wherein the medical command is entered with an input device that is connected to a controller that generates the corresponding medical command data.

45. The method of claim 43, wherein the medical command data is communicated to, and the data stream is communicated from, the ancillary medical device via an Ethernet connection.

46. The method of claim 43, wherein the medical command data is communicated to, and the data stream is communicated from, the ancillary medical device via a wireless connection.

47. The method of claim 46, wherein the wireless connection is a Bluetooth connection.

48. The method of claim 43, wherein the surgical network includes a self-configuring bus.

49. The method of claim 48, wherein the bus is a CAN bus.

50. The method of claim 43, wherein the surgical network comprises an Ethernet.

51. (cancelled)

52. The method of claim 43, wherein an ancillary controller is connected to the ancillary network.

53. The method of claim 52, wherein an ancillary input device is connected to the ancillary network.

54. The method of claim 53, wherein the ancillary input device is connected to the ancillary controller.

55. The method of claim 52, wherein the translator communicates with the ancillary controller via an Ethernet connection.

56. The method of claim 52, wherein the translator communicates with the ancillary controller via a wireless connection.

57. The method of claim 56, wherein the wireless connection is a Bluetooth connection.

58. The method of claim 43, wherein the ancillary network includes a self-configuring bus.

59. The method of claim 43, wherein the ancillary network comprises an Ethernet.

60. The method of claim 43, wherein the medical command data and the data stream are each translated by a lookup table.

61. The method of claim 43, wherein the data stream is video data, further comprising the step of reproducing the video data as a video image.

62. The method of claim 61, wherein the step of reproducing the video data as a video image includes reproducing a live video feed.

63. The method of claim 61, wherein the step of reproducing the video data as a video image includes reproducing a visual representation of the ancillary medical device or another medical device.

64. A method for controlling ancillary medical devices, the method comprising:

providing a surgical network;

entering a medical command into the surgical network;

generating corresponding medical command data;

communicating the medical command data via the surgical network;

translating the medical command data;

communicating the translated medical command data to an ancillary medical device that is not connectable to the surgical network;

executing the corresponding medical command with the ancillary medical device;

generating feedback data with the ancillary medical device;

communicating the feedback data via an ancillary network;

translating the feedback data; and

communicating the translated feedback data to the surgical network.

65. The method of claim 64, wherein the medical command is entered with an input device that is connected to a controller that generates the corresponding medical command data.

66. The method of claim 64, wherein the medical command data is communicated to, and the feedback data is communicated from, the ancillary medical device via an Ethernet connection.

67. The method of claim 64, wherein the medical command data is communicated to, and the feedback data is communicated from, the ancillary medical device via a wireless connection.

68. The method of claim 67, wherein the wireless connection is a Bluetooth connection.

69. The method of claim 64, wherein the surgical network includes a self-configuring bus.

70. The method of claim 69, wherein the bus is a CAN bus.

71. The method of claim 64, wherein the surgical network comprises an Ethernet.

72. (cancelled)

73. The method of claim 64, wherein an ancillary controller is connected to the ancillary network.

74. The method of claim 73, wherein an ancillary input device is connected to the ancillary network.

75. The method of claim 74, wherein the ancillary input device is connected to the ancillary controller.

76. The method of claim 73, wherein the translator communicates with the ancillary controller via an Ethernet connection.

77. The method of claim 73, wherein the translator communicates with the ancillary controller via a wireless connection.

78. The method of claim 77, wherein the wireless connection is a Bluetooth connection.

79. The method of claim 64, wherein the ancillary network includes a self-configuring bus.

80. The method of claim 64, wherein the ancillary network comprises an Ethernet.

81. The method of claim 64, wherein the medical command data and the feedback data are each translated by a lookup table.

82. A method for controlling medical devices, the method comprising:

providing a surgical network;

providing an ancillary network;

providing a medical device having a first interface and a second interface;

entering a medical command into the surgical network;

generating corresponding medical command data;

communicating the medical command to the medical device via the first interface via the surgical network;

executing the medical command with the medical device;

generating a data stream, having a higher bandwidth than said surgical network is capable of transmitting, with the medical device; and

communicating the data stream to the ancillary network via the second interface.

**Evidence Appendix
to Appeal Brief Under 37 CFR §41.37
Serial No. 10/601,406**

None.

**Related Proceedings Appendix
to Appeal Brief Under 37 CFR §41.37
Serial No. 10/601,406**

None.